MODEL WDR-4
4” WIND-DRIVEN RAIN RESISTANT
SIGHTPROOF EXTRUDED STATIONARY LOUVER

Standard Construction:

- **Frame**: 4” x .081” (102 mm x 2 mm) 6063-T5 Extruded Aluminum
- **Blades**: Sightproof .07” (1.8 mm) 6063-T5 Extruded Aluminum
- **Blade Angle**: 55°
- **Screen**: Bird screen - 3/4” x .050 (19 mm x 1.27 mm) flattened expanded aluminum in a removable frame on interior of louver.
- **Finish**: Mill Aluminum

Options:

- **Screens**: Insect screen - 18 x 16 mesh aluminum
  1/2” x .063 (12.7 mm x 1.6 mm) aluminum
- **Finish**: Prime Coat
  Baked Enamel
  Kynar 500 Enamel
  Clear Anodize - 204-R1 and 215-R1
  Integral Color Anodize

Sill Extensions:

- **Flange Frame**: 1-1/2” (38 mm) Front or Rear
- **Minimum Size**: 8”w x 12”h (203 mm x 305 mm)
- **Maximum Size**: 96”w x 96”h (2438 mm x 2438 mm)
- **Note**: Louvers fabricated 1/4” (6.4mm) under opening size unless otherwise noted.

Specifications

Furnish and install where shown model WDR-4 louver, manufactured by NCA Manufacturing. Louvers shall be the AMCA Licensed for Wind Driven Rain at 29.1 and 50 mph. Frames shall be .081 inches thick 6063-T5 extruded aluminum alloy. Blades shall be sight proof, 55° angle, and .07 inches thick 6063-T5 aluminum alloy. Screens shall consist of 1/2” expanded aluminum, with an aluminum frame, mounted to the louver interior, and be removable for cleaning. Louvers shall be finished with Polyurethane Acrylic enamel, Kynar 500, Powder Coat, Anodized or other finishes selected by the architect from NCA standard color charts.

Specifications are correct at time of printing. However, as part of our ‘continuous improvement program,’ we reserve the right to make further improvements without notice.
**MODEL WDR-4 PERFORMANCE DATA**

4” WIND-DRIVEN RAIN RESISTANT SIGHTPROOF EXTRUDED STATIONARY LOUVER

NCA Manufacturing, Inc. certifies that the Model WDR-4 louver shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings program.

The AMCA Certified Seal applies to Air Performance and Wind Driven Rain.

### Performance Data

**Wind Driven Rain Performance at 29 mph, 3 in/hr Rate**

- **Model:** WDR-4
- **Rating:** WDR-4 - July, 2009

<table>
<thead>
<tr>
<th>Wind Velocity</th>
<th>Pressure Drop (Inches of Water)</th>
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</thead>
<tbody>
<tr>
<td>29 mph</td>
<td>1.00</td>
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</table>

**Pressure Drop - Inches of Water (In. W.C.)**

- **Intake:**
  - 1: 0.30
  - 2: 0.60
  - 3: 0.90
  - 4: 1.20
  - 5: 1.50
  - 6: 1.80
  - 7: 2.10
  - 8: 2.40
  - 9: 2.70
  - 10: 3.00

**Wind Driven Rain Performance at 50 mph, 8 in/hr Rate**

- **Model:** WDR-4
- **Rating:** WDR-4 - July, 2009

<table>
<thead>
<tr>
<th>Wind Velocity</th>
<th>Pressure Drop (Inches of Water)</th>
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</thead>
<tbody>
<tr>
<td>50 mph</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Pressure Drop - Inches of Water (In. W.C.)**

- **Intake:**
  - 1: 0.60
  - 2: 1.20
  - 3: 1.80
  - 4: 2.40
  - 5: 3.00
  - 6: 3.60
  - 7: 4.20
  - 8: 4.80
  - 9: 5.40
  - 10: 6.00

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**Table**

### Performance Data

**Wind Driven Rain Performance at 29 mph, 3 in/hr Rate**

<table>
<thead>
<tr>
<th>Width - Inches</th>
<th>8</th>
<th>12</th>
<th>18</th>
<th>24</th>
<th>30</th>
<th>36</th>
<th>42</th>
<th>48</th>
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<th>66</th>
<th>72</th>
<th>78</th>
<th>84</th>
<th>90</th>
<th>96</th>
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**Discharge Loss Class Intake**

- **1:** 0.4 and above
- **2:** 0.3 to 0.399
- **3:** 0.2 to 0.299
- **4:** 0.199 and below

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**Core Velocity** is the airflow velocity through the Core Area (louver face area less frames) of the louver. The Discharge Loss Coefficient Class Intake is 3.

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**Core Free Area AMCA Velocity**

- **Airflow Velocity**
  - Effectiveness: Ratio
  - Effectiveness: Class

<table>
<thead>
<tr>
<th>Core Free Area</th>
<th>AMCA Effectiveness Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

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**Pressure Drop - Inches of Water (In. W.C.)**

- **Intake:**
  - 1: 0.13
  - 2: 0.22
  - 3: 0.35
  - 4: 0.48
  - 5: 0.62
  - 6: 0.75
  - 7: 0.89
  - 8: 1.02
  - 9: 1.16
  - 10: 1.29
  - 11: 1.42
  - 12: 1.56
  - 13: 1.69
  - 14: 1.83
  - 15: 1.96
  - 16: 2.10

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**Wind Velocity of 29 mph (13 m/s) at a Rainfall Rate of 3 in/hr (76 mm/hr) when tested per AMCA 500-L, Figure 5.11**

- **Setup performance. Louver test size is 41.63” (1.06m) x 41.13” (1.04m) with a core size of 39.3” (1m) x 39.3” (1m). The test louver free area is 5.29 sq. ft (.49 sq. m). The Discharge Loss Coefficient Class Intake is 3.

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**Wind Velocity of 50 mph (22 m/s) at a Rainfall Rate of 8 in/hr (202.4 mm/hr) when tested per AMCA 500-L, Figure 5.11**

- **Setup performance. Louver test size is 41.63” (1.06m) x 41.13” (1.04m) with a core size of 39.3” (1m) x 39.3” (1m). The test louver free area is 5.29 sq. ft (.49 sq. m). The Discharge Loss Coefficient Class Intake is 3.